



IFWO

RAW SEQUENCE LISTING

DATE: 09/29/2004

PATENT APPLICATION: US/10/815,337

TIME: 13:05:45

Input Set : A:\Sequence listing.ST25.txt

Output Set: N:\CRF4\09292004\J815337.raw

3 <110> APPLICANT: Gurtu, V
 5 <120> TITLE OF INVENTION: Renilla GFP MUTANTS WITH INCREASED FLUORESCENT INTENSITY
 7 <130> FILE REFERENCE: 25436/2412
 9 <140> CURRENT APPLICATION NUMBER: US 10/815,337

C--> 10 <141> CURRENT FILING DATE: 2004-04-01

12 <150> PRIOR APPLICATION NUMBER: 60/460,432

13 <151> PRIOR FILING DATE: 2003-04-04

15 <160> NUMBER OF SEQ ID NOS: 80

17 <170> SOFTWARE: PatentIn version 3.3

19 <210> SEQ ID NO: 1

20 <211> LENGTH: 720

21 <212> TYPE: DNA

22 <213> ORGANISM: Renilla reniformis

24 <400> SEQUENCE: 1

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27	aacctggagg	gcgtggtgaa	caaccacgtg	ttcaccatgg	agggtgcgg	caagggcaac	120
29	atcctgttcg	gcaaccagct	ggtgcagatc	cgcgtagcca	agggcgcccc	cctgcccttc	180
31	gccttcgaca	tcctgagccc	cgccttcag	tacggcaacc	gcaccttcac	caagtacccc	240
33	gaggacatca	gcgacttctt	catccagagc	ttccccgcg	gcttcgtgta	cgagcgcacc	300
35	ctgcgctacg	aggacggcgg	cctggtggag	atccgcagcg	acatcaacct	gatcgaggag	360
37	atgttcgtgt	accgcgtgga	gtacaagggc	cgcaacttcc	ccaacgcagg	ccccgtgatg	420
39	aagaagacca	tcaccggcct	gcagcccagc	ttcgagggtg	tgtacatgaa	cgacggcgtg	480
41	ctggtggggc	aggtgatcct	ggtgtaccgc	ctgaacagcg	gcaagttcta	cagctgccac	540
43	atgcgcaccc	tgatgaagag	caagggcgtg	gtgaaggact	tccccgagta	ccacttcac	600
45	cagcaccgcc	tggagaagac	ctacgtggag	gacggcggct	tcgtggagca	gcacgagacc	660
47	gccatcgccc	agctgaccag	cctgggcaag	cccctgggca	gcctgcacga	gtgggtgtaa	720

50 <210> SEQ ID NO: 2

51 <211> LENGTH: 239

52 <212> TYPE: PRT

53 <213> ORGANISM: Renilla reniformis

55 <400> SEQUENCE: 2

57	Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met
58	1				5					10					15	
61	Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr
62				20					25					30		
65	Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val
66		35				40					45					
69	Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile
70		50				55					60					
73	Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro
74	65				70				75					80		
77	Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val
78				85				90						95		

ENTERED

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81 Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
82          100          105          110
85 Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
86          115          120          125
89 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
90          130          135          140
93 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
94 145          150          155          160
97 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
98          165          170          175
101 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
102          180          185          190
105 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
106          195          200          205
109 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
110          210          215          220
113 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
114 225          230          235
117 <210> SEQ ID NO: 3
118 <211> LENGTH: 720
119 <212> TYPE: DNA
120 <213> ORGANISM: Renilla reniformis
122 <400> SEQUENCE: 3
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125 aacctggagg gcgtggtgaa caaccacgtg ttcaccatgg agggctgcgg caagggaac      120
127 atcctgtag gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc      180
129 gccttcgaca tcctgagccc cgccttcag tacggcaacc gcaccttcac caagtacccc      240
131 gaggacatca gcgacttctt catccagagc ttccccgcgg gcttcgtgta cgagcgacc      300
133 ctgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgaggag      360
135 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgatgag      420
137 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcgtg      480
139 ctggtggggc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac      540
141 atgcgcaccc tgatgaagag caaggcgctg gtgaaggact tccccgagta ccacttcac      600
143 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtggagca gcacgagacc      660
145 gccatcgccc agctgaccag cctgggcaag cccctgggca gcctgcacga gtgggtgtaa      720
148 <210> SEQ ID NO: 4
149 <211> LENGTH: 239
150 <212> TYPE: PRT
151 <213> ORGANISM: Renilla reniformis
153 <400> SEQUENCE: 4
155 Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met
156 1          5          10          15
159 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
160          20          25          30
163 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Leu Gly Asn Gln Leu Val
164          35          40          45
167 Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
168          50          55          60
171 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro

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172 65          70          75          80
175 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
176          85          90          95
179 Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
180          100          105          110
183 Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
184          115          120          125
187 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
188          130          135          140
191 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
192 145          150          155          160
195 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
196          165          170          175
199 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
200          180          185          190
203 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
204          195          200          205
207 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
208          210          215          220
211 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
212 225          230          235
215 <210> SEQ ID NO: 5
216 <211> LENGTH: 720
217 <212> TYPE: DNA
218 <213> ORGANISM: Renilla reniformis
220 <400> SEQUENCE: 5
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223 aacctggagg gcgtggtgaa caaccacgtg ttcaccatgg agggctgcgg caaggggcaac      120
225 atcctgttcg gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc      180
227 gccttcgaca tcctgagccc cgccttcag tacggcaacc gcaccttcac caagtacccc      240
229 gaggacatca ggcacttctt catccagagc ttccccgcgg gcttcgtgta cgagcgcacc      300
231 ctgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgagggg      360
233 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgatgat      420
235 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcggtg      480
237 ctggtggggc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac      540
239 atgcgcaccc tgatgaagag caaggcggtg gtgaaggact tccccgagta ccaacttcac      600
241 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtagagca gcacgagacc      660
243 gccatgcgcc agctgaccag cctgggcaag cccctgggca gctgcacga gtgggtgtaa      720
246 <210> SEQ ID NO: 6
247 <211> LENGTH: 239
248 <212> TYPE: PRT
249 <213> ORGANISM: Renilla reniformis
251 <400> SEQUENCE: 6
253 Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met
254 1          5          10          15
257 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr
258          20          25          30
261 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
262          35          40          45

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265 Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
266      50                      55                      60
269 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
270 65                      70                      75                      80
273 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
274      85                      90                      95
277 Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
278      100                     105                     110
281 Ser Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr
282      115                     120                     125
285 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
286      130                     135                     140
289 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
290 145                     150                     155                     160
293 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
294      165                     170                     175
297 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
298      180                     185                     190
301 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
302      195                     200                     205
305 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
306      210                     215                     220
309 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
310 225                     230                     235
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314 <211> LENGTH: 720
315 <212> TYPE: DNA
316 <213> ORGANISM: Renilla reniformis
318 <400> SEQUENCE: 7
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321 aacctggagg gcggtggtgaa caaccacgtg ttcacccatgg agggctgcgg caagggcaac      120
323 atcctgttcg gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc      180
325 gccttcgaca tctgagcccc cgccttcacg tacggcaacc gcaccttcac caagtacccc      240
327 gaggacatca gcgacttctt catccagagc ttccccgcgg gcttcgtgta cgagcgaccc      300
329 atgcgtaacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgaggag      360
331 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgatgatg      420
333 aagaagacca tcaccggcct gcagcccagc ttcgagggtgg tgtacatgaa cgacggcgtg      480
335 ctggtggggc aggtgatact ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac      540
337 atgcgcaccc tgatgaagag caagggcgtg gtgaaggact tccccgagta ccacttcac      600
339 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtggagca gcacgagacc      660
341 gccatcgccc agctgaccag cctgggcaag cccctgggca gcctgcacga gtgggtgtaa      720
344 <210> SEQ ID NO: 8
345 <211> LENGTH: 239
346 <212> TYPE: PRT
347 <213> ORGANISM: Renilla reniformis
349 <400> SEQUENCE: 8
351 Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met
352 1      5                      10                      15
355 Ser Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr

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Output Set: N:\CRF4\09292004\J815337.raw

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356          20          25          30
359 Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val
360          35          40          45
363 Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile
364          50          55          60
367 Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro
368 65          70          75          80
371 Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val
372          85          90          95
375 Tyr Glu Arg Thr Met Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg
376          100         105         110
379 Ser Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr
380          115         120         125
383 Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile
384          130         135         140
387 Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val
388 145          150         155         160
391 Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe
392          165         170         175
395 Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys
396          180         185         190
399 Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr
400          195         200         205
403 Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln
404          210         215         220
407 Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val
408 225          230         235
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412 <211> LENGTH: 720
413 <212> TYPE: DNA
414 <213> ORGANISM: Renilla reniformis
416 <400> SEQUENCE: 9
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419 aacctggagg gcgtggtgaa caaccacgtg ttcaccatgg agggctgcgg caagggcaac      120
421 atcctgtccg gcaaccagct ggtgcagatc cgcgtgacca agggcgcccc cctgcccttc      180
423 gccttcgaca tcctgagccc cgccttcag tacggcaacc gcaccttcac caagtacccc      240
425 gaggacatca gcgacttctt catccagagc ttccccgccc gcttcgtgta cgagcgcacc      300
427 ctgcgctacg aggacggcgg cctggtggag atccgcagcg acatcaacct gatcgaggag      360
429 atgttcgtgt accgcgtgga gtacaagggc cgcaacttcc ccaacgacgg ccccgtgatg      420
431 aagaagacca tcaccggcct gcagcccagc ttcgaggtgg tgtacatgaa cgacggcgtg      480
433 ctggtgggccc aggtgatcct ggtgtaccgc ctgaacagcg gcaagttcta cagctgccac      540
435 atgcgcaccc tgatgaagag caagggcggtg gtgaaggact tccccgagta ccaacttcac      600
437 cagcaccgcc tggagaagac ctacgtggag gacggcggct tcgtggagca gcacgagacc      660
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443 <211> LENGTH: 239
444 <212> TYPE: PRT
445 <213> ORGANISM: Renilla reniformis
447 <400> SEQUENCE: 10

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/29/2004
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Input Set : A:\Sequence listing.ST25.txt
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Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#: 63, 64, 65, 66, 67, 68, 70, 71, 72, 73, 74, 75, 76, 77, 78, 80

VERIFICATION SUMMARY

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L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date